



Sub  
BI

$$\begin{pmatrix} 1 \\ 2 \\ 3 \end{pmatrix}$$

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

$$\begin{matrix} 1 \\ 2 \end{matrix}$$

- 1
- 2

1           12.    The operating system of claim 9, wherein said first data structure  
2 further comprises:  
3           a process control block pointer, wherein said process control block pointer  
4           points to a process control block;  
5           processor information; and  
6           stack information.

1  
2           13.    The operating system of claim 12, wherein said process control block  
3 comprises:  
4           memory information;  
5           thread information;  
6           device driver information; and  
7           stack information.

1           14.    The operating system of claim 12, wherein said processor information  
2 comprises:  
3           a processor identifier; and  
4           thread information;.

1           15.    The operating system of claim 9, wherein said second data structure  
2 further comprises:  
3           control information.

1           16.    The operating system of claim 15, wherein said second data structure  
2 further comprises:  
3           data.

1           17.    The operating system of claim 9, wherein said operating system  
2 employs a client/server architecture.

1  
2

- 1
- 2
- 3
- 4
- 5

1  
2

3  
4  
5  
6

- 1
- 2
- 3

4  
5

1  
2

3  
4  
5  
6  
7  
8

- 1 23. The method of claim 22, wherein said performing said fast-path  
2 message copy comprises:  
3 copying said message from a memory space of said first task to a  
4 memory space of said second task.
- 1 24. The method of claim 22, wherein said performing said message copy  
2 comprises:  
3 copying said message from said first task to said thread control  
4 block/message structure;  
5 waiting for said thread to be queued to said thread queue; and  
6 copying said message from said thread control block/message structure  
7 to said second task.
- 1 25. The method of claim 22, wherein said first task acts as a client task and  
2 said second task acts as a server task.
- 1 26. A computer program product encoded in computer readable media,  
2 said computer program product comprising:  
3 a first set of instructions, executable on a computer system, configured to send  
4 a message between a first task and a second task by performing a send  
5 operation, wherein said first task performs said send operation and said  
6 send operation employs a thread control block/message structure;  
7 a second set of instructions, executable on said computer system, configured to  
8 cause said second task to perform a receive operation.
- 1 27. The computer program product of claim 26, wherein said thread  
2 control block/message structure comprises:  
3 a thread control block, wherein said thread control block is described by a first  
4 data structure, and  
5 a message, wherein said message is described by a second data structure and  
6 said first data structure comprises said second data structure.

1

2

3

4

5

6

7

8

**1**

2

3

4

5

6

7

8

9

10

1

2

3

4

5

1

2

3

4

5

a second sub-subset of instructions, executable on said computer system,  
 configured to wait for said thread to be queued to said thread queue;  
 and  
 a third sub-subset of instructions, executable on said computer system,  
 configured to copy said message from said thread control  
 block/message structure to said second task.

32. The computer program product of claim 29, wherein said first task acts  
 as a client task and said second task acts as a server task.

33. A computer system comprising:  
 a processor;  
 computer readable medium coupled to said processor; and  
 computer code, encoded in said computer readable medium, configured to  
 cause said processor to:  
 send a message between a first task and a second task by performing a  
 send operation, wherein said first task performs said send  
 operation and said send operation employs a thread control  
 block/message structure; and  
 cause said second task to perform a receive operation.

34. The computer system of claim 33, wherein said thread control  
 block/message structure comprises:  
 a thread control block, wherein said thread control block is described by a first  
 data structure, and  
 a message, wherein said message is described by a second data structure and  
 said first data structure comprises said second data structure.

35. The computer system of claim 33, wherein said thread control  
 block/message structure supports control of a thread within said second task and said  
 computer code is further configured to cause said processor to:  
 determine if said thread is queued to a thread queue of said second task; and

5 transfer said message from said first task and said second task.

1 36. The computer system of claim 35, wherein said computer code further  
2 configured to cause said processor to transfer said message from said first task and  
3 said second task is further configured to cause said processor to:  
4 pass said message between said first task and said second task by performing a  
5 fast-path message copy if said thread is queued to said thread queue;  
6 and  
7 pass said message between said first task and said second task by performing a  
8 message copy if said thread is not queued to said thread queue.

1 37. The computer system of claim 36, wherein said computer code further  
2 configured to pass said message between said first task and said second task by  
3 performing a fast-path message copy is further configured to cause said processor to:  
4 copy said message from a memory space of said first task to a memory space  
5 of said second task.

1 38. The computer system of claim 36, wherein said computer code further  
2 configured to pass said message between said first task and said second task by  
3 performing a message copy is further configured to cause said processor to:  
4 copy said message from said first task to said thread control block/message  
5 structure;  
6 wait for said thread to be queued to said thread queue; and  
7 copy said message from said thread control block/message structure to said  
8 second task.

1 39. The computer system of claim 36, wherein said first task acts as a  
2 client task and said second task acts as a server task.

add  
a1